

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN15804+A2

Izoperm Plus Eco and Varaplus Eco



Owner of the declaration:

Partel

Product:

Izoperm Plus Eco and Varaplus Eco

Declared unit:

1 m²

This declaration is based on Product Category Rules:

EN 15804:2012+A2:2019, EPD Ireland PCR Part A,
Version 2.1, 2022
Construction products (EN 15804+A2) (version 2.0.1),
PCR 2019:14

Program operator:

EPD Ireland

Declaration number:

EPDIE-26-341

Issue date:

23.06.2026

Valid to:

22.06.2031

General information

Product

Izoperm Plus Eco and Varaplus Eco

Program operator:

EPD Ireland
19 Mountjoy Square, Dublin D01 E8P5
Phone: +353 (01) 6815862
web: <https://www.igbc.ie/epd-home/>

Declaration number:

EPDIE-26-341

This declaration is based on Product Category Rules:

EN 15804:2012+A2:2019, EPD Ireland PCR Part A, Version 2.1, 2022
Construction products (EN 15804+A2) (version 2.0.1), PCR 2019:14

Statement of liability:

The owner of the declaration shall be liable for the underlying information and evidence. The EPD Program operator shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Type of EPD

Representative product EPD

Declared unit:

1 m² Izoperm Plus Eco and Varaplus Eco

Scope of the EPD:

A1-A3, A4, A5, C1, C2, C3, C4, D

Functional unit:

1 m² of Izoperm Plus Eco; 1 m² of Varaplus Eco vapour control membrane

Verification:

Independent verification of the declaration and data, according to ISO14025:2010

Third party verifier:

Marcel Gómez Ferrer, Marcel Gómez Consultoria Ambiental

Owner of the declaration:

Partel
Contact person: Chloe Quinlivan
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Manufacturer:

Partel
17 Claregalway Corporate Park
H91 R85P Claregalway, Co. Galway, Ireland

Place of production:

Duffel, Belgium Valkeakoski, Finland
Europe

Issue date:

23.06.2026

Valid to:

22.06.2031

Year of study:

2024

Comparability:

Environmental Product Declarations from different programmes may not be directly comparable if not compliant with EN 15804:2012+A2:2019. Comparability is further dependent on the specific product category rules, system boundaries and allocations, and background data sources. See clause 5.3 of EN 15804:2012+A2:2019

LCA consultant or person responsible for LCA:
EcoReview, Peter Seymour

Approved:

SIGNATURE OF PROGRAMME OPERATOR



Pat Barry, CEO - Irish Green Building Council

Product

Product description:

IZOPERM PLUS ECO is an ecological vapour control layer that's built to last. It is paper-based and is composed of 57% renewable FSC paper, contributing to healthier buildings. This high tear-resistance and strong VCL membrane delivers reliable performance of airtightness and moisture management in the internal building envelope.

Roll sizes – 1.5m & 3m x 50m.

VARA PLUS ECO is an innovative, smart ecological vapour control layer, responsibly developed by Partel. This sustainable product is paper based, consisting of up to 62% of renewable FSC paper – for lower carbon emissions in buildings. Designed for maintaining the optimum airtightness in the building envelope, this quality environmentally conscious product ensures active moisture control with its hygro-variable technology. It delivers a high-performance solution that prevents heat loss through the thermal insulation. Partel VARA PLUS ECO can be used as an inner airtight membrane and vapour control layer. Primary usage includes internal walls, ceilings, and floors. The Partel ECO membranes supports a safe, eco-responsible building design for lower environmental impact.

Roll sizes – 1.5m & 3m x 50m

Product specification:

IZOPERM PLUS ECO

Key features and benefits:

- Consists of up to 60% of renewable FSC paper for healthier buildings
- 3 layers membrane - FSC kraft paper on both sides reduces carbon footprint
- Designed to be used as a vapour control layer, featuring fixed Sd value
- Optimal airtightness and water vapour transmission rate in different climate conditions
- High tear-resistance and optimum strength due to fabric mesh reinforcement
- Watertight – W1 class

Typical Applications:

- Ideal for timber frame structures
- Suitable for blown wool insulations or solutions
- New builds and refurbishments
- Residential and commercial developments
- Compatible with all insulation types

VARA PLUS ECO

Key features and benefits:

- Consists to 65% of renewable FSC paper for healthier buildings
- 3 layers membrane - FSC kraft paper on both sides reduces carbon footprint
- Hygrovariable Technology for active moisture control in the assembly
- Optimal airtightness and water vapour transmission rate in different climate conditions
- High tear-resistance and optimum strength due to fabric mesh reinforcement
- Watertight – W1 class

Typical Applications:

- Ideal for timber frame structures
- Suitable for blown wool insulations or solutions
- New builds and refurbishments
- Residential and commercial developments
- Compatible with all insulation types

Technical data:

Property	Standard	Value IZOPERM PLUS ECO	Value VARA PLUS ECO
Sd value	EN 1931	20m	18m
Water resistance	EN 1928	Class W1	Class W1
Fire performance	EN 13501-1	F	F
G value	-	100 MNs/g	40MNs/g
Colour	-	Brown	Kraft
Vapour permeability	ASTM E96	0.17	0.07 - 8.58
Tensile strength	EN 12311-1	450/300	450/300
Elongation MD/CD	EN 12311-1	3% / 4.5%	3% / 4.5%
Nail Tear Resistance	EN 12310-1	130 / 130 N	130 / 130 N
CE Labelling	EN 13894	Available	Available

Market/Geographical Area:

Republic of Ireland and UK

Reference service life, product

No RSL. Product has a 15 year performance guarantee.

Reference service life, building or construction works

LCA: Calculation rules

Declared unit:

1 m² Izoperm Plus Eco and Varaplus Eco

kg per Declared unit 0.1672

Cut-off criteria:

All relevant inputs and outputs - like emissions, energy and materials - have been taken into account in this LCA, and in accordance with EN15804+A2:2019. The study covers at least 95% of the materials and energy per module and at least 99% of the total use of materials and energy of each unit process. Long term emissions have been excluded from the study.

Allocation:

The source of default unit processes or activities is the Ecoinvent database version 3.11, system model "Allocation, cut-off by classification". The measurement of environmental impacts in this EPD uses the LCIA methodologies recommended for PEF 3.1. In this EPD, the waste processes are allocated in the relevant module. In the case of the use of secondary materials or energy recovered from secondary fuels, the system boundary between the system under study and the previous system (providing the secondary materials) is set where outputs of the previous system, e.g. materials, products, building elements or energy, reach the end-of-waste state. The modularity and the polluter payer principles have been followed.

Data quality:

Specific data has been collected through relevant documentation from the primary production sites and from the subcontractor, for the year 2024 (January 1st-December 31st). All data collected reflects the manufacturer's and the subcontractors' current production.

The data quality assessment covers geographical, technological and temporal representativeness and is based on the data quality criteria of Annex E, Table E2 of EN 15804. There was no poor or very poor relevant data used for geographical, technological and temporal representativeness.

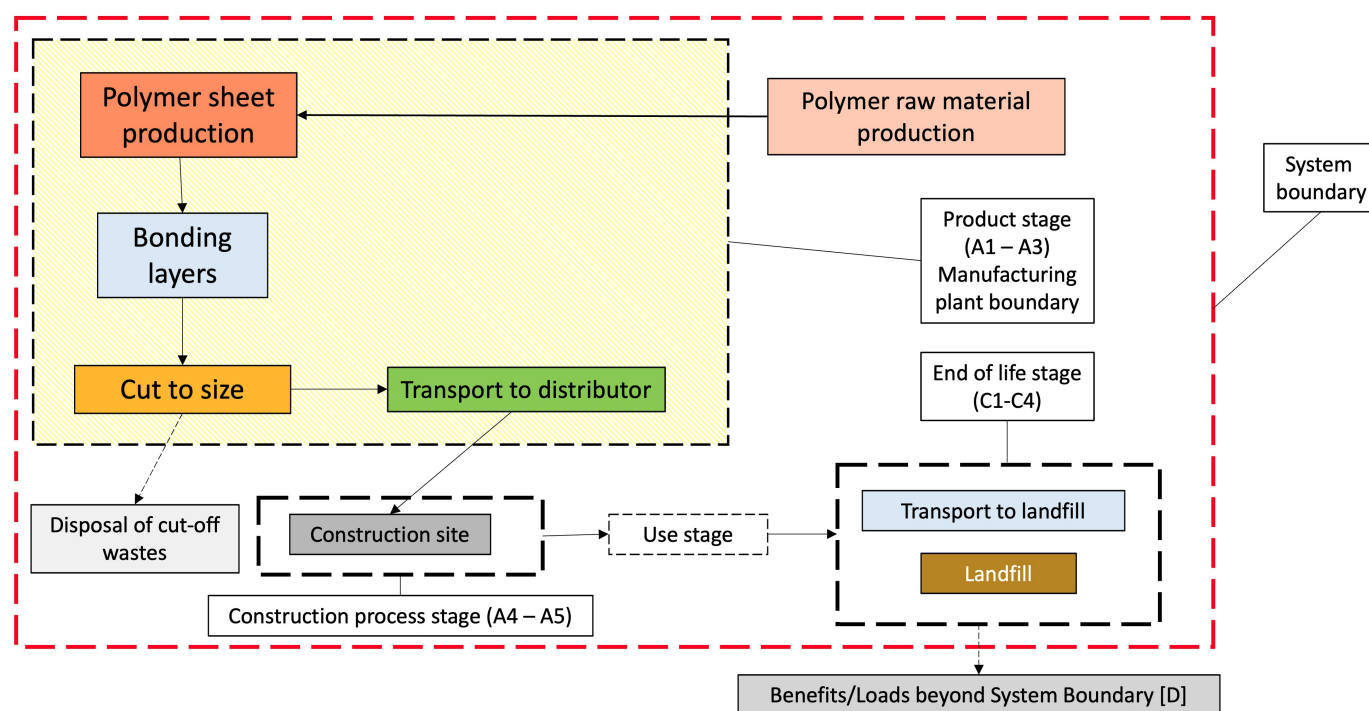
The overall data quality has been evaluated as good for geographical and technological representativeness and very good for temporal representativeness.

Scope and type of EPD (X = Module declared; ND = Module not declared)

Product stage			Construction installation stage		Use stage								End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use		De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7		C1	C2	C3	C4	D
X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND		X	X	X	X	X

System boundary:

This LCA covers the Product (A1, A2 and A3), Transport to site (A4), Construction Installation (A5), User (B1 to B7), End of Life (C1 to C4) and Benefits/loads beyond the system boundary (D) Stages, as indicated above. This is termed: "Cradle to grave and module D".



Additional technical information:

Electricity modelling

The GWP-GHG of electricity is 0,013 kg CO₂ eq/kWh of 100% nuclear energy and of the district heating is 0,042 kg CO₂ eq/kWh at the manufacturing plant in Finland. The GWP-GHG of electricity is 0,032 kg CO₂ eq/kWh of 100% wind energy at the manufacturing plant in Belgium. The GWP-GHG of electricity is 0,88 kg CO₂ eq/kWh of residual electricity mix at the subcontractor's plant.

LCA: Scenarios and additional technical information

The following information describes the scenarios in the different modules of the EPD.

The transport to the customer phase (A4) is modelled on delivery distance of 150 km.

The installation phase (A5) involves sticking the membrane tape to the surfaces with its sticky side applied to the surface. On-site installation losses are 2% by mass.

In the deconstruction/demolition stage C1 it is assumed that the membranes are removed manually from building – thus no energy or materials are used, and the impacts in C1 are assumed to be zero.

In the transport phase C2 it is assumed that these materials travel 50km to landfill, as per default values in the Product Category Rules PCR for EPD Ireland [5].

The end of life processing scenario is assumed to be landfill, C4. This is appropriate for the membranes, as they are made of a mix of different materials, and is the default scenario for mixed materials in the Product Category Rules PCR for EPD Ireland. Thus there are zero loads or benefits beyond the system boundary for these products.

LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

Environmental impact										
Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	GWP-total	kg CO ₂ -eq	2.45E-01	4.66E-03	5.29E-02	0.00E+00	1.64E-03	0.00E+00	2.28E-01	0.00E+00
	GWP-fossil	kg CO ₂ -eq	4.53E-01	4.65E-03	5.67E-02	0.00E+00	1.64E-03	0.00E+00	1.54E-02	0.00E+00
	GWP-biogenic	kg CO ₂ -eq	-2.09E-01	4.26E-06	-3.88E-03	0.00E+00	1.50E-06	0.00E+00	2.13E-01	0.00E+00
	GWP-luluc	kg CO ₂ -eq	6.95E-04	2.30E-06	5.74E-05	0.00E+00	8.10E-07	0.00E+00	1.12E-06	0.00E+00
	ODP	kg CFC11 -eq	1.58E-08	1.01E-10	1.46E-09	0.00E+00	3.60E-11	0.00E+00	4.60E-11	0.00E+00
	AP	mol H ⁺ -eq	1.70E-03	1.02E-05	2.21E-04	0.00E+00	3.59E-06	0.00E+00	1.33E-05	0.00E+00
	EP-FreshWater	kg P -eq	1.68E-04	3.78E-08	5.94E-06	0.00E+00	1.33E-08	0.00E+00	2.11E-08	0.00E+00
	EP-Marine	kg N -eq	5.65E-04	2.50E-06	5.44E-05	0.00E+00	8.83E-07	0.00E+00	1.07E-05	0.00E+00
	EP-Terrestrial	mol N -eq	5.42E-03	2.60E-05	5.01E-04	0.00E+00	9.19E-06	0.00E+00	5.41E-05	0.00E+00
	POCP	kg NMVOC -eq	2.33E-03	1.58E-05	2.25E-04	0.00E+00	5.57E-06	0.00E+00	2.23E-05	0.00E+00
	ADP-minerals&metals ¹	kg Sb-eq	1.93E-06	1.52E-08	3.03E-07	0.00E+00	5.36E-09	0.00E+00	3.39E-09	0.00E+00
	ADP-fossil ¹	MJ	9.96E+00	6.60E-02	1.21E+00	0.00E+00	2.33E-02	0.00E+00	4.05E-02	0.00E+00
	WDP ¹	m ³	1.88E-01	2.73E-04	4.29E-02	0.00E+00	9.65E-05	0.00E+00	1.82E-03	0.00E+00

GWP-total = Global Warming Potential total; GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

"Reading example: 9.0 E-03 = 9.0*10⁻³ = 0.009"

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

Remarks on environmental impacts

Although the values are zero, the "Additional Environmental Impact Indicators" are not used in this EPD. This covers: PM (Particulate Matter emissions); IRP (Ionizing radiation – human health); ETP-fw (Eco toxicity – freshwater); HTP-c (Human toxicity – cancer effects); HTP-nc (Human toxicity – non cancer effects); SQP (Potential Soil Quality Index).

Additional environmental impact indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
 PM	Disease incidence	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
 IRP ²	kgBq U235 -eq	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
 ETP-fw ¹	CTUe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
 HTP-c ¹	CTUh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
 HTP-nc ¹	CTUh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
 SQP ¹	dimensionless	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Potential Soil Quality Index (dimensionless)

"Reading example: 9.0 E-03 = 9.0×10^{-3} = 0.009"

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator
2. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Resource use										
Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	PERE	MJ	2.72E+00	1.04E-03	1.40E-01	0.00E+00	3.66E-04	0.00E+00	5.63E-04	0.00E+00
	PERM	MJ	1.64E+00	0.00E+00	3.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	4.36E+00	1.04E-03	1.73E-01	0.00E+00	3.66E-04	0.00E+00	5.63E-04	0.00E+00
	PENRE	MJ	6.80E+00	7.02E-02	1.21E+00	0.00E+00	2.48E-02	0.00E+00	4.31E-02	0.00E+00
	PENRM	MJ	2.69E+00	0.00E+00	5.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	9.49E+00	7.02E-02	1.26E+00	0.00E+00	2.48E-02	0.00E+00	4.31E-02	0.00E+00
	SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	4.49E-03	8.86E-06	1.12E-03	0.00E+00	3.13E-06	0.00E+00	4.36E-05	0.00E+00

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

*Reading example: 9.0 E-03 = $9.0 \times 10^{-3} = 0.009$

End of life - Waste										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	
 HWD	kg	2.86E-03	4.20E-07	1.45E-04	0.00E+00	1.48E-07	0.00E+00	2.88E-07	0.00E+00	
 NHWD	kg	2.57E-01	3.28E-03	1.05E-02	0.00E+00	1.16E-03	0.00E+00	1.67E-01	0.00E+00	
 RWD	kg	2.16E-05	2.17E-08	1.68E-06	0.00E+00	7.66E-09	0.00E+00	8.44E-09	0.00E+00	

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9.0 E-03 = 9.0×10^{-3} = 0.009"

End of life - Output flow										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	
 CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
 MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
 MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
 EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
 EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported energy electrical; EET = Exported energy thermal

"Reading example: 9.0 E-03 = 9.0×10^{-3} = 0.009"

Biogenic Carbon Content		
Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	0.00E+00
Biogenic carbon content in accompanying packaging	kg C	0.00E+00

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Additional requirements

Dangerous substances

None of the substances contained in the product are listed in the "Candidate List of Substances of Very High Concern for authorisation", or they do not exceed the limit for registration with the European Chemicals Agency.

Mandatory additional information on release of dangerous substances to indoor air, soil and water.

Bibliography

- [1] ISO 14040: Environmental management - Life cycle assessment – Principles and Framework', International Organization for Standardization, ISO14040:2006.
- [2] ISO 14044: Environmental management - Life cycle assessment - Requirements and guidelines', International Organization for Standardization, ISO14044:2006.
- [3] ISO 14025: Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures', International Organization for Standardization, ISO14025:2006.
- [4] I.S. EN 15804:2012+A2:2019.: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products', EN 15804:2012+A2:2019.
- [5] Product Category Rules : Part A Version 2 Implementation and use of I.S. EN 15804:2012 and CEN TR 16970:2016 in Ireland. Product Category Rules: Part A, version 2.
- [6] Construction products (EN 15804+A2) (version 2.0.1), PCR 2019:14.
- [7] CML - Department of Industrial Ecology, CML-IA Characterisation Factors, Dated August 2016, Leiden University, Leiden, Netherlands.
- [8] PEF methodology final draft.pdf (europa.eu)
- [9] https://www.aib-net.org/sites/default/files/assets/facts/residual-mix/2023/AIB_2023_Residual_Mix_FINALResults09072024.pdf
- [10] Environmental Product Declaration: EPD-IES-0028074:001. The International EPD® System. Version date: 2026-03-20. Valid until: 2031-03-20.

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